count of which is given in the August number of the MINING RECORD. As far as the aggregate value of the gold is concerned this is, no doubt, correctly stated, inasmuch as the present practice of the Vancouver office is to send all its bullion to Seattle where it is purchased by the United States office. The total thus is not affected by its Canadian rival, and cannot be so until the establishment of a mint within the Dominion creates a local market.

The cause of the falling off is placed by Mr. Wing to the lateness of the season in starting, which he declares opened some six weeks after the usual time. Should the fall be open the Seattle office expects to deal with at least $25,000,000 in gold as against $22,000,000 for 1900. This increase, which is about 15 per cent., is

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based by the Seattle people on the reports received from the north by their correspondents which are said to be based upon the size of the dumps.

A further cause is assigned, viz.: the scarcity of water for sluicing operations which, however, it is thought, will be overcome later in the fall, always supposing that the season remains open longer than is usual.

The equipment of the Seattle office and its method of procedure is much about the same as that in Vancouver but is, of course, conducted on a much larger scale. There is a staff of some thirty employees subordinate to the assayer in charge, Mr. Fred. A. Wing. The clerical, melting and assaying departments are kept distinct as in the Vancouver office. The first is under the control of the chief clerk, Mr. T. G. Hathaway, the second under the chief melter, Mr. W. R. Towne and the third is looked after by Mr. J. C. Newton, the chief assayer. The building, of which an illustration is given, is one that is leased by the Federal government and although an appropriation has been recommended for the purpose of erecting a government structure, yet, as Seattle has just succeeded in obtainining a million dollar appropriation for a Federal building it is unlikely that any further grants will be made in this direction for some years to come. In the meantime the office will remain in its present location. The building is a good sized one and is practically—the basement being unusually well lighted and commodious—of three stores. The melting and receiving departments, together with the strong room, are situated on the ground floor, the assay offices being above and the machinery and carpenter shop below. The capacity of the plant is upwards of $500,000 a day, but the melting department has proved itself on occasion capable of handling $750,000 within the limits of one working day.

The system of receiving the gold is much about the same as in Vancouver. The depositor sees his dust weighed in before him on a huge Trœmner scale, a duplicate of that to be seen in the Canadian office, and is given a receipt for the same. This receipt is made out in triplicate and bears a number which alone goes up stairs to the assay offices. The melter, indeed, knows the name of the depositor, inasmuch as this is often a guide to the locality whence the gold is procured and the correct flux to be used can by this means be arrived at without time lost in experiment. The weight of the gold is checked by two receiving clerks weighing separately. The depositor is given his money for his gold within the next 24 hours following deposit. If the melter is ready to receive the gold at once it is simply placed in an open box and taken into the melting department, an illustration of which is here shown, but not before the gold is carefully reweighed by him. Should pressure of work preclude immediate treatment the gold dust is locked into a separate box and put away uutil the next day.

The melting department is one that is particularly complete. It comprises one gigantic circular furnace capable of treating over 2,000 ounces at one melt, two other furnaces, whose crucibles will receive from 1600 to 1700 ounces of gold apiece ; four No. 4 furnaces, whose capacity is from 600 to 700 ounces, and two "little giants" whose charge is about 30 ounces.

Underneath the melting room is a blower having a capacity of 1200 cubic feet per minute for each cylinder, and there are two, exerting a pressure of 2¼ pounds to the square inch. This is driven by a small electric motor. In addition gas is used, intermixed with the air in the tuyere, which has four inches of pressure.

The crucibles used are known as the Dixon lead crucible composed of an admixture of graphite and high-grade silicon. These are placed within the furnace and the fluxes properly arranged with the gold, and on the furnace being covered the air is let into the tuyere or circular pipe surrounding the furnace. The air passing under pressure into the tuyere creates a vacuum, passes a siphon through which the gas is drawn and mixed with it. It then passes into the furnace through three apertures set equidistant around the bottom. These apertures are not at right angles to the inner surface of the cylindrical furnace but enter at an angle of 60 degrees so that a rotary motion is given to the flame which soon brings up the temperature to between 2200° and 2300° Fahr. The method is slightly varied in the largest furnace, as also in the two smallest.

At the bottom of the furnace is a dumping arrangement by means of which the contents of the crucible, if